TRIPP·LITE
POWER PROTECTION

Owner's Manual

SmartPro®
Datacenter INT

Intelligent, Line-Interactive
UPS Systems (230V Output)

Safety ⚠

This manual contains important instructions and warnings that should be followed during the installation, operation and storage of all Tripp Lite UPS Systems.

UPS Location Warnings

- Install your UPS indoors, away from excess moisture or heat, dust or direct sunlight.
- For best performance, keep the indoor temperature between 0° C and 40° C (between 32° F and 104° F).
- Leave adequate space around all sides of the UPS for proper ventilation.

UPS Connection Warnings

- If your UPS has a corded input, connect it to a properly grounded AC power outlet. Do not modify the UPS's plug. Do not use adapters that eliminate the UPS's connection to ground.
- If your UPS has a hardwired input, ensure that it is properly grounded.
- Do not plug your UPS into itself; this will damage the UPS and void your warranty.
- If you are connecting your UPS to a motor-powered AC generator, the generator must provide clean, filtered computer-grade output.

Equipment Connection Warnings

- Do not use Tripp Lite UPS Systems for life support applications in which a malfunction or failure of a Tripp Lite UPS System could cause failure or significantly alter the performance of a life-support device.
- Do not connect surge suppressors to the output of your UPS. This may damage your UPS and will void both the surge suppressor and UPS warranties.

Battery Warnings

- Your UPS does not require routine maintenance. Do not open your UPS for any reason. There are no user-serviceable parts inside.
- Battery replacement must be performed by qualified service personnel. Because the batteries present a risk of electrical shock and burn from high short-circuit current, qualified service personnel should observe proper precautions: Unplug and turn off the UPS before performing battery replacement. Use tools with insulated handles and replace the existing batteries with the same number and type of new batteries (Sealed Lead-Acid). Do not open the batteries. Do not short or bridge the battery terminals with any object.
- The UPS batteries are recyclable. Refer to local codes for disposal requirements, or in the US only call 1-800-SAV-LEAD for disposal information. Do not dispose of the batteries in a fire.
- When adding external batteries, connect only Tripp Lite battery packs of the correct voltage and type. Your UPS's External Battery Connector should match the color of the connector of any battery pack you want to connect.

Quick Installation

1 **Position your External Battery Pack(s).**
 - *If positioning multiple Battery Packs, place them side by side or stack them no more than three high.*
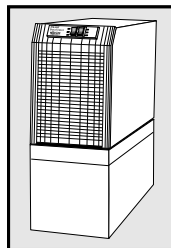
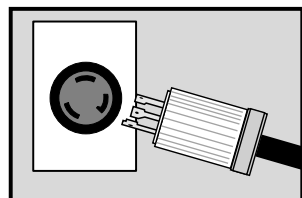**2** **Position your Power Module.**
  - *The Module may be stacked on top of your Battery Packs or placed beside them.*

3 **Plug your External Battery Pack into your Power Module's External Battery Connector on its back panel.**
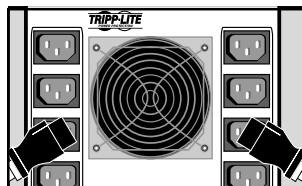 - *For multiple Battery Packs, connect the first to the Power Module, then daisy-chain the others: connect the second to the first, the third to the second, and so on.*
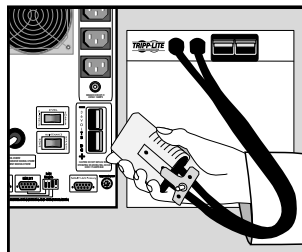
4 **Plug your Power Module into a L6-30 single-phase AC outlet on a 30-amp dedicated circuit that provides 220V to 240V at 50 Hz.**

**5** **Plug your equipment into the Power Module.**

6 **Turn your UPS ON.**
  - *Set the System Switch on the UPS's back panel to the "ENABLE" (RIGHT) position. (Figure 1a)* This switch activates the battery charger and microprocessor. The " $\sim$ " light will flash until you engage the ON/Standby Switch to activate the "ON" mode.

  - *Engage the momentary ON/Standby Switch on the UPS's front panel and release it to activate the "ON" mode and supply power to the UPS receptacles. (Figure 2b)*
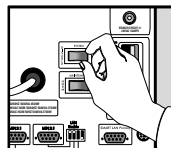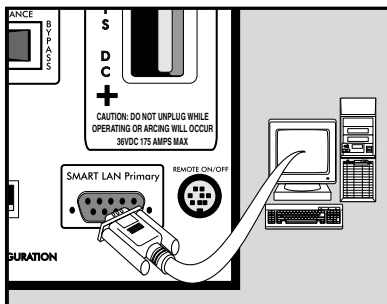
1a. Back panel
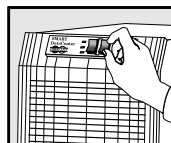
2b. Front panel

Communications on Next Page...
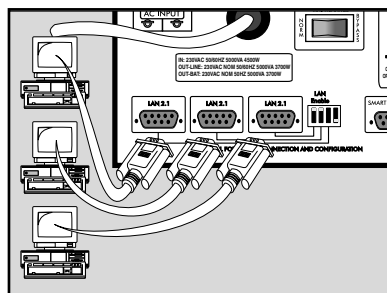
Computer Communications (Optional)*

1 ### DB9 Port Connection –Optional–*

*Using the grey or tan Tripp Lite cable that came with your UPS, connect your primary server's DB9 port to the single DB9 port labeled "LAN 4.1" or "Smart LAN Primary" (which provides complete intelligent RS-232 communications).***

2 ## If you have additional computers:

a. *Connect them to the DB9 ports labeled "LAN 2.1" (which provide basic, contact-closure shutdown capabilities) using the black cables that came with your UPS.*

b. *Set their corresponding LAN Interface DIP Switches to the ACTIVATE (DOWN) position. See diagram for which switch controls which port.*** Note: the last switch on the right has no function.*

2a. Back panel
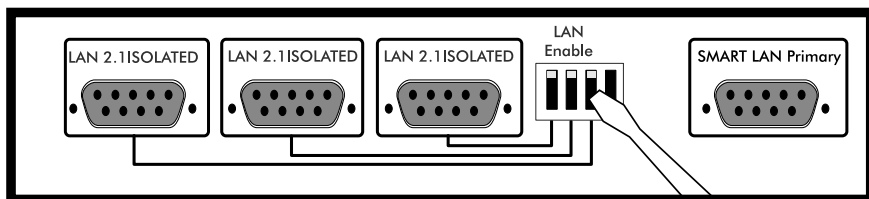
2b. Back Panel

3 ## Load software and run the installation program appropriate for your operating system.

* Computer communications are optional. Your UPS will function properly without these connections.
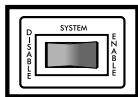*** The "LAN 4.1" or "Smart" DB9 port is always enabled and is not controlled by the LAN Interface DIP Switches.*
*** If you do not connect a computer to any of the "LAN 2.1" DB9 ports, set their corresponding LAN Interface DIP Switches to the DEACTIVATE (UP) position.

Basic Operation

Switches

System Switch (Middle Back Panel)

This switch activates the UPS's battery charger and intelligent microprocessor. ALWAYS leave it in the "ENABLE" (RIGHT) position when your UPS is plugged in. Only set the switch to "DISABLE" (LEFT) to reduce battery drain when you unplug your UPS for storage or shipping.

Note: When this switch is on "ENABLE", the "✓" light will flash until you engage the ON/ Standby Switch to turn power ON at the UPS receptacles.

ON/Standby Switch (Front Panel)
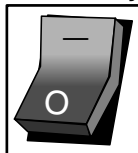
This momentary switch on the front panel controls power to the UPS receptacles. Engage it momentarily and release it to toggle between the "ON" mode (power ON at the UPS receptacles) and "Standby" mode (power OFF at the UPS receptacles).

Mute/Test Switch (Front Panel)
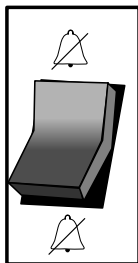
Use this momentary switch on the front panel to do two things:

Silence the UPS On Battery alarm

Engage this switch and release it to silence the UPS On Battery alarm, a series of short beeps that sounds intermittantly when the UPS is providing AC power from battery. Note: when the battery is nearly depleted, the Low Battery alarm, a continuous beep that cannot be silenced, will alert you to immediately shut down connected equipment.

Test your UPS's battery charge

Leave your connected equipment ON. With your UPS plugged in and completely turned ON, engage this switch; hold it there for 5 seconds and release it. You will hear a series of short beeps as the UPS momentarily switches to battery to test its charge. The "⊠" light will turn ON and the alarm (a long, continuous beep) will sound if your UPS fails a self-test and/or the UPS battery is less than fully charged. If this occurs, let the UPS charge for 12 hours and perform a second self-test. If the light continues to stay on, contact Tripp Lite for service. CAUTION: Do not unplug your UPS to test its batteries. This will remove safe electrical grounding and may introduce a damaging surge into your network connections.

Maintenance Bypass Switch (Middle Rear Panel)
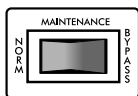
This switch, used during hot swap battery replacement, should be left in the "NORMAL" (LEFT) position during ordinary operation. Set this switch to "BYPASS" (RIGHT) to connect or disconnect external battery packs while the UPS is plugged in and supporting a load. The "⬉" light on the front panel will light to indicate that battery backup protection is not available until this switch is returned to the "NORMAL" (LEFT) position.
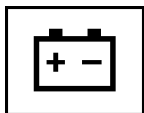
Basic Operation (Continued)

Indicator Lights

**Light descriptions apply when the UPS is plugged into a wall outlet and turned ON.**
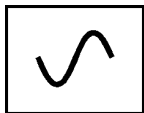
This green light will shine *constantly* to indicate AC power is available at the receptacles. It will *flash* to indicate AC power is not available. (See "System Enable Switch" and "On/Standby Switch" descriptions above.)

This multi-colored light displays 7 separate UPS battery charge conditions. It will turn from red (low) to yellow (medium) to green (full) to show you the level of battery charge remaining in both internal and connected batteries. If the light is constant, your UPS is operating from line power, and the battery is charging. If the light is flashing, your UPS is operating from battery power, and the battery is discharging. When the light flashes red, close any files you are working on and shut down your computer.
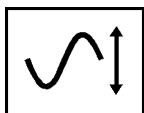
Whenever your UPS is automatically correcting high or low AC line voltage, this green light will turn ON and the UPS will gently click. These are both normal, automatic operations of your UPS, and no action is required on your part.
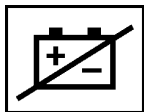
This red light will turn ON if your UPS fails a self-test and/or the UPS battery is less than fully charged. If it lights, let the UPS charge for 12 hours, then perform a self-test. If the light continues to stay on, contact Tripp Lite for service.

This multi-colored light displays 4 separate UPS load conditions. It will turn from green (low) to yellow (medium) to red (high) as you connect equipment to show you the load level your UPS is supporting. When the light is red, your UPS is supporting a load above 85% of its capacity. If the red light begins flashing, then your UPS is severely overloaded. Remove overload immediately until light stops flashing.

This red light will turn ON when you set the Maintenance Bypass Switch to "BYPASS", indicating that the Power Module has turned off its battery charger, allowing you to properly disconnect and replace the Battery Packs. The light may also come on if Battery Packs are improperly disconnected, indicating that the Power Module is protecting itself from potential overvoltages. While this light is on, the UPS will still provide filtered utility AC power and will provide battery backup power if any batteries are connected. DB9 communications are unaffected. To return the UPS's charger to normal operation, set the Maintenance Bypass Switch to "NORMAL". If the light has come on due to improper battery disconnection, cycle the Maintenance Bypass Switch to "BY-PASS" then to "NORMAL" to reset the UPS.

Other UPS Features

AC Receptacles (Rear Panel)
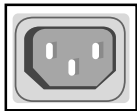
These 230V IEC-320 receptacles provide your connected equipment with AC line power during normal operation and battery power during blackouts and brownouts. They also protect your equipment against damaging surges and line noise. You can remotely reboot connected equipment by turning receptacles OFF and ON using Tripp Lite PowerAlert software.

Circuit Breakers (Rear Panel)

These breakers will trip to prevent damage to your UPS due to overload. Two single-pole circuit breakers protect each 230V outlet bank and one double-pole circuit breaker protects the main input circuit bank that powers all the outlets. If a breaker trips, remove any overload then allow the UPS to cool before resetting the breaker.
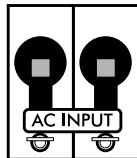
"Smart" RS-232 Port (Lower Rear Panel)
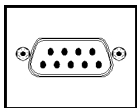
This port, labeled "SMART LAN PRIMARY" or "LAN 4.1" on the UPS, connects your UPS to a workstation or server. Use with Tripp Lite software and cabling to monitor and manage network power and to automatically save open files and shut down equipment during power failures. This port uses RS-232 communications to transmit UPS and power conditions (Pin 7 = Transmit; Pin 8 = Common; Pin 9 = Receive). Contact Tripp Lite Customer Support for more information and a list of available SNMP, network management and connectivity products.

Contact Closure Ports (Lower Rear Panel)
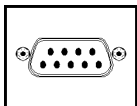
These ports, labeled "LAN 2.2" on the Control Module, are also used to connect your UPS to a workstation or server. Use with Tripp Lite software and cabling to automatically save open files and shut down equipment during a blackout. This port uses contact-closure signals to indicate line-fail and low-battery status. Contact Tripp Lite Customer Support for more information.

Battery Connector (Rear Panel)
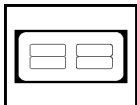
Use to connect Tripp Lite battery packs. Refer to the label next to the connector for the appropriate Tripp Lite battery pack to connect. Refer to instructions available with the battery pack for complete connection information and safety warnings.

Remote Control Interface Port (Lower Rear Panel)

Use to connect an optional RT-2 Remote Control Adapter to control the DataCenter via telephone or modem. Contact Tripp Lite for information about ordering the RT-2; refer to the RT-2 manual for operating instructions.

Storage & Service

Storage

Turn your UPS OFF: first engage the ON/Standby Switch and release it to place your UPS in the "Standby" mode, then move the System Enable Switch to the "DISABLE" (DOWN) position to prevent battery drain, then disconnect the UPS power cord from the wall outlet. If you plan on storing your UPS for an extended period of time, recharge the UPS batteries once every three months. Follow steps #3 and #4 in the Quick Installation section and allow the UPS to charge until the "▯" light glows green (may take 6 or more hours depending on the number of batteries connected). If you leave your UPS batteries discharged for an extended period of time, they may suffer permanent loss of capacity.

Service

If returning your UPS for service, contact your local Tripp Lite dealer or distributor. They will refer you to a service center. Please carefully pack the UPS using the ORIGINAL PACKING MATERIAL that came with the unit. Enclose a letter describing the symptoms of the problem. If the UPS is within the 2 year warranty period, enclose a copy of your sales receipt.

Specifications

	SMARTDC3000INT	SMARTDC3000XRINT
Output Capacity (VA/Watts):	3000/2400	3000/2400
Battery Runtime (with Battery Pack) for Half Load/Full Load in Minutes:	(with 1 BP36V33*) 26+/11+[†]	(with 1 BP36VXR*) 84+/36+[†]
Battery Recharge Time:	2-4 hrs.	2-4 hrs.
Approvals:	—	—
	SMARTDC5000INT	SMARTDC5000XLINT
Output Capacity (VA/Watts):	5000/3750	5000/3750
Battery Runtime (with Battery Pack) for Half Load/Full Load in Minutes:	(with 1 BP36V33*) 42+/18+[†]	(with 2 BP36V33*) 108+/42+[†]
Battery Recharge Time:	2-4 hrs.	2-4 hrs.
Approvals:	SASO	SASO

* Included with UPS.

† Battery Runtime can be increased by adding additional external battery packs. This will increase recharge time, however.

Input Voltage (220-240V); Input Frequency (50 Hz); On-Line Input Voltage Range (166-276 volts); Voltage-Regulated Output Voltage Range (220/240V +8%/-15%); On-Battery Output Voltage Range (220/240V ± 5%); Output Waveform Line Mode (filtered sinewave); Output Waveform Battery Mode (PWM sine wave); AC Surge Suppression (exceeds IEEE 587 Cat. A & B standards); AC Noise Attenuation (>40 dB); AC TVSS Protection Modes (H to N, H to G, N to G).

The policy of Tripp Lite is one of continuous improvement. Specifications are subject to change.

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